

-24-
CLAIMS:

1. An isolated nucleic acid molecule selected from the group consisting of:
 - a) a nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID Nos. 1 to 8 or their complementary nucleotide sequences;
 - b) a nucleic acid molecule which will hybridize with a nucleotide sequence according to a) under stringent conditions;
 - c) a nucleic acid molecule comprising a nucleotide sequence which has sufficient homology with a nucleotide sequence according to a) or b) to be a functional analogue thereof;
 - d) a nucleic acid molecule which exhibits a genetic code degeneration relationship with respect to a nucleotide sequence according to any of a) to c); and
 - e) a nucleic acid molecule according to any nucleotide sequence of a) to d) which has been modified by deletions, additions, substitutions, translocations, inversions and/or insertions and is a functional analogue of a nucleotide sequence according to any of a) to d).
2. The nucleic acid molecule according to claim 1, characterized in that the nucleotide sequence as stated under c) has at least 40% homology with one of the nucleotide sequences stated under a).
3. The nucleic acid molecule according to claim 1, characterized in that the nucleotide sequence as stated under c) has at least 60%, preferably 70%, more preferably 80% and still more preferably 90% homology with one of the nucleotide sequences stated under a).
4. The nucleic acid molecule according to any of claims 1 to 3, characterized by being a genomic DNA, cDNA and/or RNA.

5. A vector comprising a nucleic acid molecule according to any of claims 1 to 4.
6. A host cell comprising the vector according to claim 5.
7. A polypeptide encoded by a nucleic acid molecule according to any of claims 1 to 4.
8. A recognition molecule directed against a nucleic acid molecule according to any of claims 1 to 4, a vector according to claim 5, a host cell according to claim 6 and/or a polypeptide according to claim 7.
9. The recognition molecule according to claim 8, characterized by being an antibody, an antibody fragment and/or an antisense construct, especially an RNA interference molecule.
10. A vaccine comprising a nucleic acid molecule according to any of claims 1 to 4, a vector according to claim 5, a host cell according to claim 6 and/or a polypeptide according to claim 7 and/or a recognition molecule according to claim 8 or 9, optionally with a pharmaceutically acceptable carrier.
11. A method for the detection of graft reactions in a sample from a patient, characterized in that a level of at least one nucleic acid molecule according to any of claims 1 to 4 is determined in the sample, and the level is compared with a control level of a comparative sample from a healthy patient, wherein the graft reactions or the absence thereof (tolerance) are detected by a modified level in the sample as compared to the control level.
12. The method according to claim 11, characterized in that said graft is selected from the group consisting of lung, spleen, heart, kidney, liver, pancreas alone or in combination, and/or tissues, especially islets, aortas, cartilage.
13. The method according to claim 11 or 12, characterized in that a DNA or RNA concentration, gene expression, number of copies of a nucleic acid, peptide concentration, peptide activity and/or as concentration of isoforms are determined as said level.

14. The method according to any of claims 11 to 13, characterized in that said level is determined as an mRNA concentration.
15. The method according to any of claims 11 to 14, characterized in that a rejection crisis, a rejection reaction, a course of a rejection, a tolerance reaction and/or a course of a tolerance are detected as said graft reaction.
16. The method according to any of claims 11 to 15, characterized in that said rejection crisis, rejection reaction or course of a rejection is detected by a reduced level of a nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID No. 3 and SEQ ID No. 7 or their complementary nucleotide sequences.
17. The method according to any of claims 11 to 15, characterized in that said rejection reaction, course of a rejection or rejection crisis is detected by an increased level of a nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID No. 1 and SEQ ID No. 2 or their complementary nucleotide sequences.
18. The method according to any of claims 11 to 15, characterized in that said tolerance or course of a tolerance is detected by an increased level of a nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID No. 3, SEQ ID No. 4, SEQ ID No. 5, SEQ ID No. 6, SEQ ID No. 7 and SEQ ID No. 8 or their complementary nucleotide sequences.
19. Use of a nucleic acid molecule according to any of claims 1 to 4, vector according to claim 5, host cell according to claim 6, polypeptide according to claim 7, recognition molecule according to claim 8 or 9 and/or vaccine according to claim 10 in medical prophylaxis, clinical follow-up, graft follow-up treatment, clinical diagnostics and/or therapy.
20. The use according to claim 19 for the detection of T-cell-mediated immune processes, especially pathogenic T-cell-mediated immune processes.

21. The use according to claim 19 or 20, characterized in that said T-cell-mediated immune processes are auto-immune diseases or inflammations, especially an antiglomerular basal membrane disease, auto-immune diseases of the nervous system, systemic lupus erythematosus, Addison's disease, antiphospholipid syndrome, IgA glomerulonephritis, Goodpasture's syndrome, Lambert-Eaton myasthenic syndrome, bullous pemphigoid, thrombocytopenic idiopathic purpura, auto-immune thyroiditis, rheumatoid arthritis, insulin-dependent diabetes mellitus, pemphigus, auto-immune hemolytic anemia, dermatitis herpetiformis Duhring, membranous glomerulonephritis, Graves' disease, sympathetic ophthalmia, auto-immune polyendocrinopathies, multiple sclerosis and/or Reiter's disease.
22. The use according to any of claims 19 to 21, characterized in that said T-cell-mediated immune processes are physiological, pathological, clinical and/or subclinical graft reactions.
23. The use according to claim 22, characterized in that said graft reactions include a rejection crisis, a rejection reaction, a course of a rejection, a tolerance reaction and/or a course of a tolerance.
24. A kit comprising a nucleic acid molecule according to any of claims 1 to 4, a vector according to claim 5, a host cell according to claim 6, a polypeptide according to claim 7, a recognition molecule according to claim 8 or 9 and/or a vaccine according to claim 10.
25. Use of the kit according to claim 24 for the detection of a graft reaction.